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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/581,044	05/30/2006	Yoichiro Tabata	403723/TAKADA	6775
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EXAMINER MAYEKAR, KISHOR				
ART UNIT 1795		PAPER NUMBER		
NOTIFICATION DATE 10/09/2009		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/581,044

Applicant(s)

TABATA ET AL.

Examiner

Kishor Mayekar

Art Unit

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SF/ICE)
Paper No(s)/Mail Date 05/06
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. Figures 10-12 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the time division device must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled,

the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The disclosure is objected to because of the following informalities: the "Cross-Reference To Related Applications" in page 1 is missing.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, the recitation "an ozone power supply for ... frequency, an inverter ..., a transformer and a reactor ... and outputting the high AC voltage and a low voltage" is confusing to its meaning and further in view of the later recitation "the ozone power supply includes ... a common potential with n high voltages". The recitation "for converting an n-phase AC voltage" is confusing as to the identical recitation of "an n-phase AC voltage" from the inverter. The recitation "high-voltage electrodes of an ozone generator unit receiving the same high-voltage potentials" is confusing to the relation of the unit here with the plurality of the units. The same is applied to the recitation "from each ozone generator unit". The recitation "n-high voltage electrode terminals and one low-voltage electrode terminals" is confusing as to its identical recitations "n-high voltage terminals" and "a low-voltage terminals".

Regarding claim 2, the recitation "the ozone power supply is disposed between ... transformer and ... units" is confusing when claim 1 recites that the ozone power supply includes n-phase transformer and units. And the same is applied to claim 1 to the recitation "the one low-voltage electrode terminal" with respect to "low-voltage terminal". The recitation "the n ozone generator units" lacks antecedent basis or confusing when comparing to the recited plurality of ozone generator units.

Regarding claim 5, the recitation "the transformer ... as an n-phase transformer or reactor ... converted" is confusing as whether the reactor is a type of transformer.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 2004-142,963 A (to which US 2004/76560 A1 an English equivalent is used for the teachings) in view of Tabata et al. (US Patent No. 5,942,196), both references cited by Applicant. JP '963 's invention is directed to an ozone generating apparatus comprising an ozone power supply having a high frequency inverter and an ozone transformer; a discharge member having a high-voltage electrode terminal and a low-voltage electrode terminal; and a plurality of multi-layer flat-plate ozone generator units that stacked in the discharge member and including, alternately stacked, a plurality of flat-plate high-voltage electrodes and low-voltage electrodes, wherein the inverter is adapted to change power from an input power source to a required frequency and outputting it to the transformer and wherein

the transformer is adapted to improve a power factor of a load by its own inductance, increase the power to a predetermined voltage and supply the power to the plurality of ozone generating units (Figs. 1 and 2 and paragraph 96-98). The difference between JP '963 and claim 1 is the provision of the recited ozone power supply. Tabata teaches in an ozone generating apparatus the limitation (Fig. 9 or 11). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified JP '963's teachings as shown by Tabata because this would result in an ozone generating apparatus of a large capacity and capable of producing a large amount of ozone.

As to the subject matter of each of claims 2, 3 and 6, Tabata teaches it in Fig. 9 or 11.

8. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP '963 as modified by Tabata '196 as applied to claims 1-3 and 6 above, and further in view of Shinagawa et al. (US 6,143,256). The difference between the references as applied above and the instant claims is each of the recited limitations. Shinagawa teaches in an ozone generating apparatus the provision of a current detector (see abstract). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the references' teachings as shown by Shinagawa because this would result in controlling the operation of the ozone generating

apparatus. Further, since current and voltage are known to be directly proportional, the current detector can be replaced by a voltage detector as claimed in claim 8.

Allowable Subject Matter

9. Claims 4 (and its dependent claim 5) would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: Because the prior art reference do not disclose in an ozone generating apparatus the provision of the recited n reactors and n-phase transformer in combination with other recited structures of claim 1 as claimed in claim 4.

Conclusion

11. Claims 1-8 are rejected.

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kishor Mayekar whose telephone number is (571) 272-1339. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kishor Mayekar/
Primary Examiner, Art Unit 1795